

# Promoting Healthy Eating: What Research Says That Parents Need to Know



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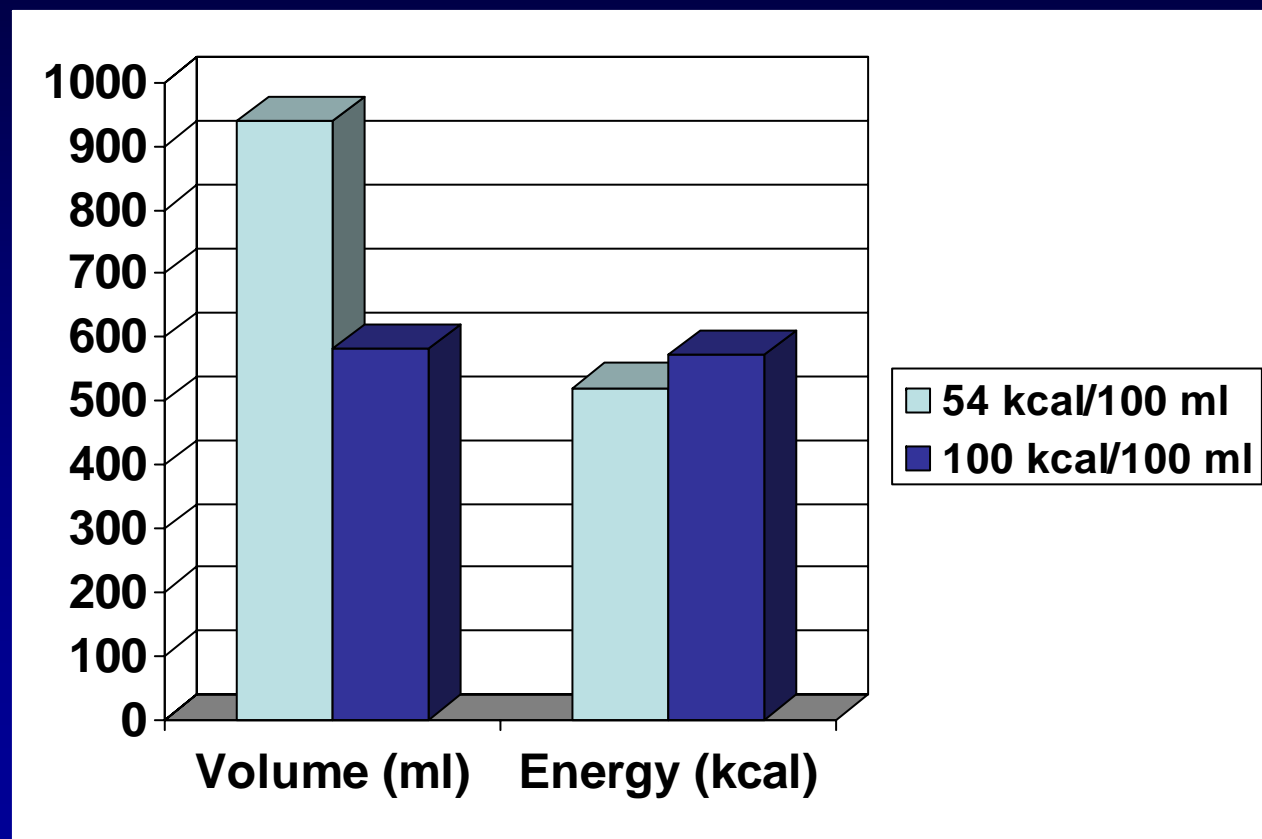
A close-up photograph of a baby with light brown hair and blue eyes, wearing a light blue shirt. The baby is sitting in a high chair with a blue and white checkered background. The baby's face is smeared with food, and they are holding a spoon in their mouth. The text "Is healthful eating born or made?" is overlaid in yellow.

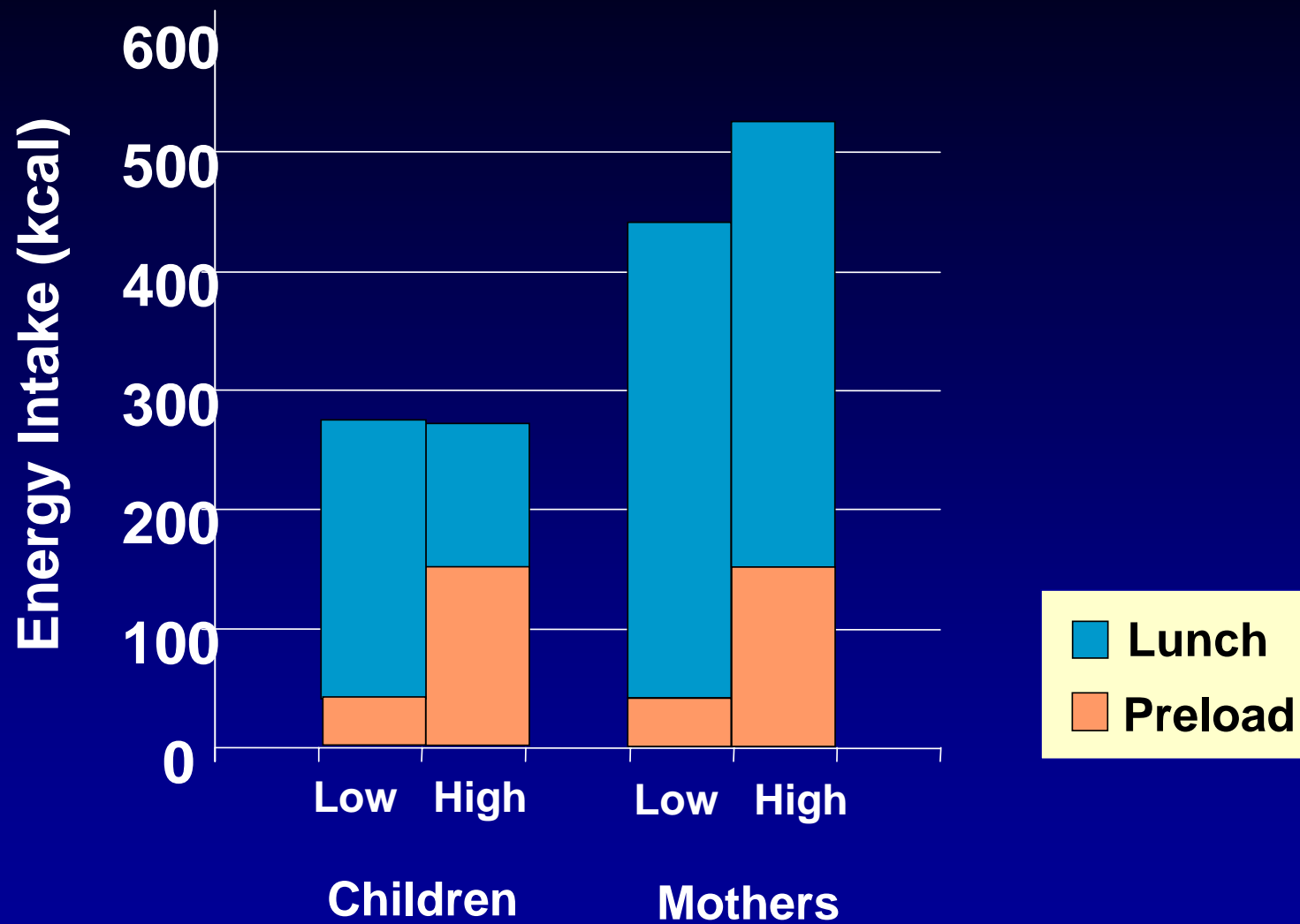
Is healthful eating  
born or made?

# Regulation of energy intake

- Female infants followed from birth to 3 ½ months

**By 6 weeks**





Birch, Deysher, *Dev Psych*, 1986

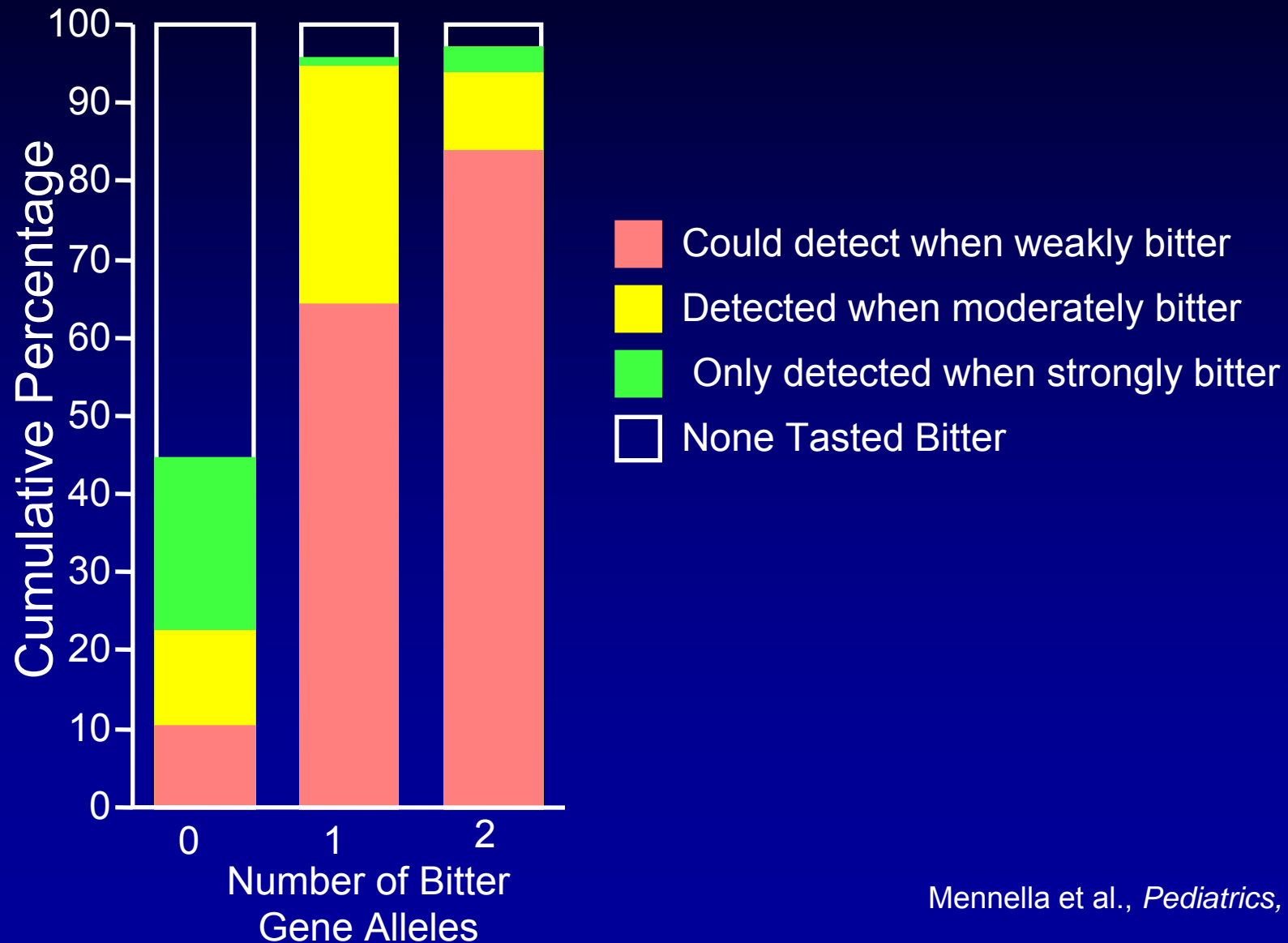
# Taste sensitivity

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- Preference for sweet
  - Rejection of bitter
    - Neutral for salt
- Preference for sour

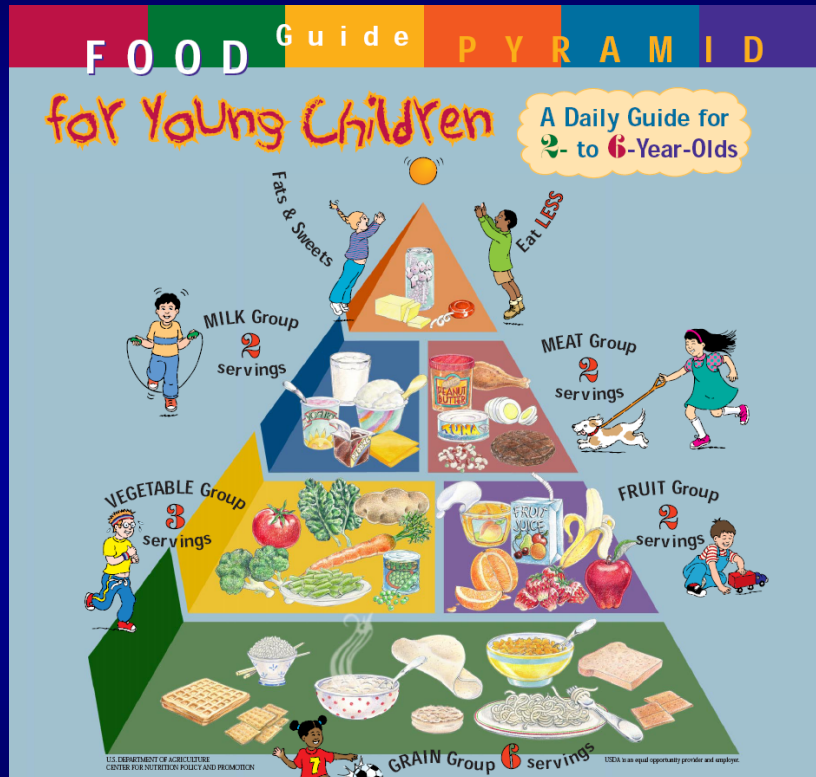
# Genetic influences on bitter sensitivity



Mennella et al., *Pediatrics*, 2005



# From taste to preference



# Exposure to Carrot Flavor



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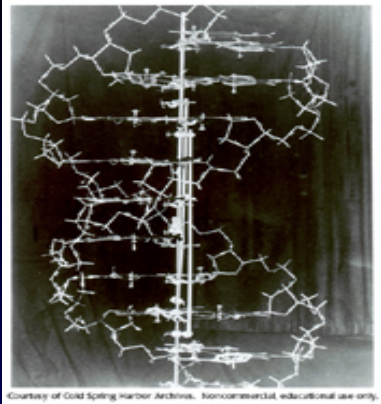


# Acceptance of Carrots



Mennella, Jagnow, Beauchamp, *Pediatrics*, 2001





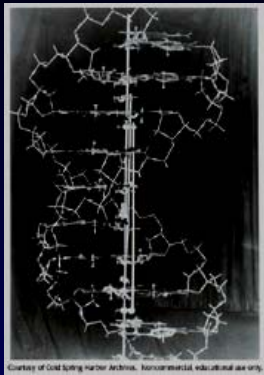
**Susceptibility**

**Behavior**

**Child Obesity**

**Environment**

Hill , Peters, *Science*, 1998  
Astrup, Hill , Rössner, *Obes Rev*, 2004



**Susceptibility**



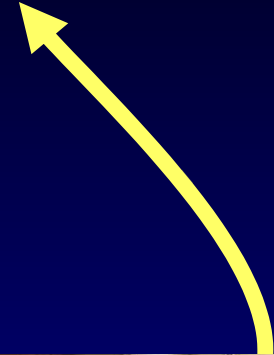
**Child Obesity**

**Environment**

**Behavior**



**Family**



# Family trends

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- Family composition<sup>1</sup>
  - 28% of children <18 y in single parent families.
  - 8% of children living with a grandparent.
- Working families<sup>1</sup>
  - Dual employment in 62% in families with children < 18 y.
  - 77% of single-mothers employed.
- Day-care<sup>2</sup>
  - 63% of children < 5 y in child-care.

# Family Influence

- Food selection
- Social modeling
- Feeding interaction



# Eating Behavior



- Food acceptance
- Intake regulation

# Health Outcome

- Nutrient adequacy
- Overweight

# USDA Children's Nutrition Center Children's Eating Laboratory

**BCM**  
Baylor College of Medicine

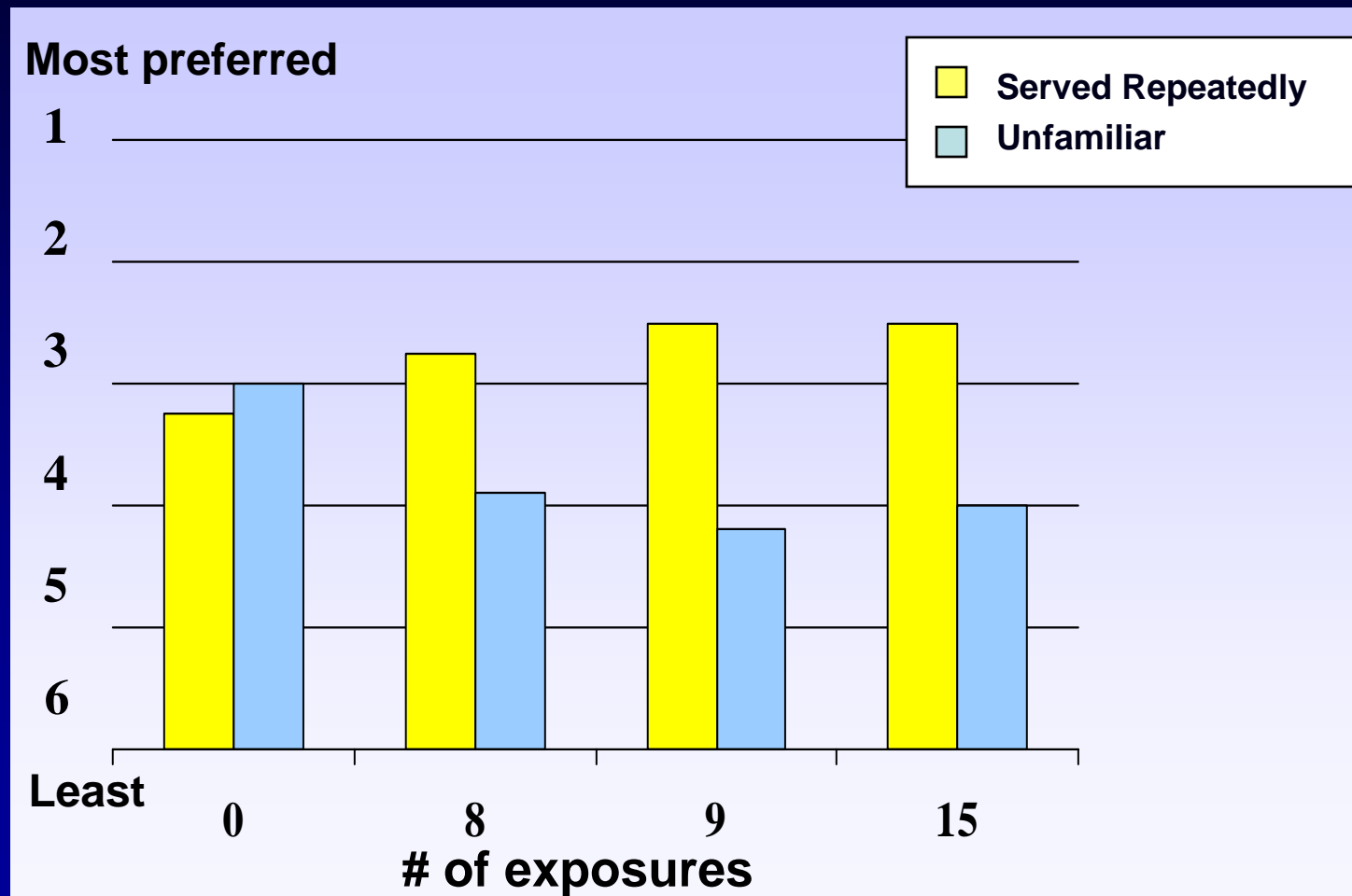


**Observation Rooms**



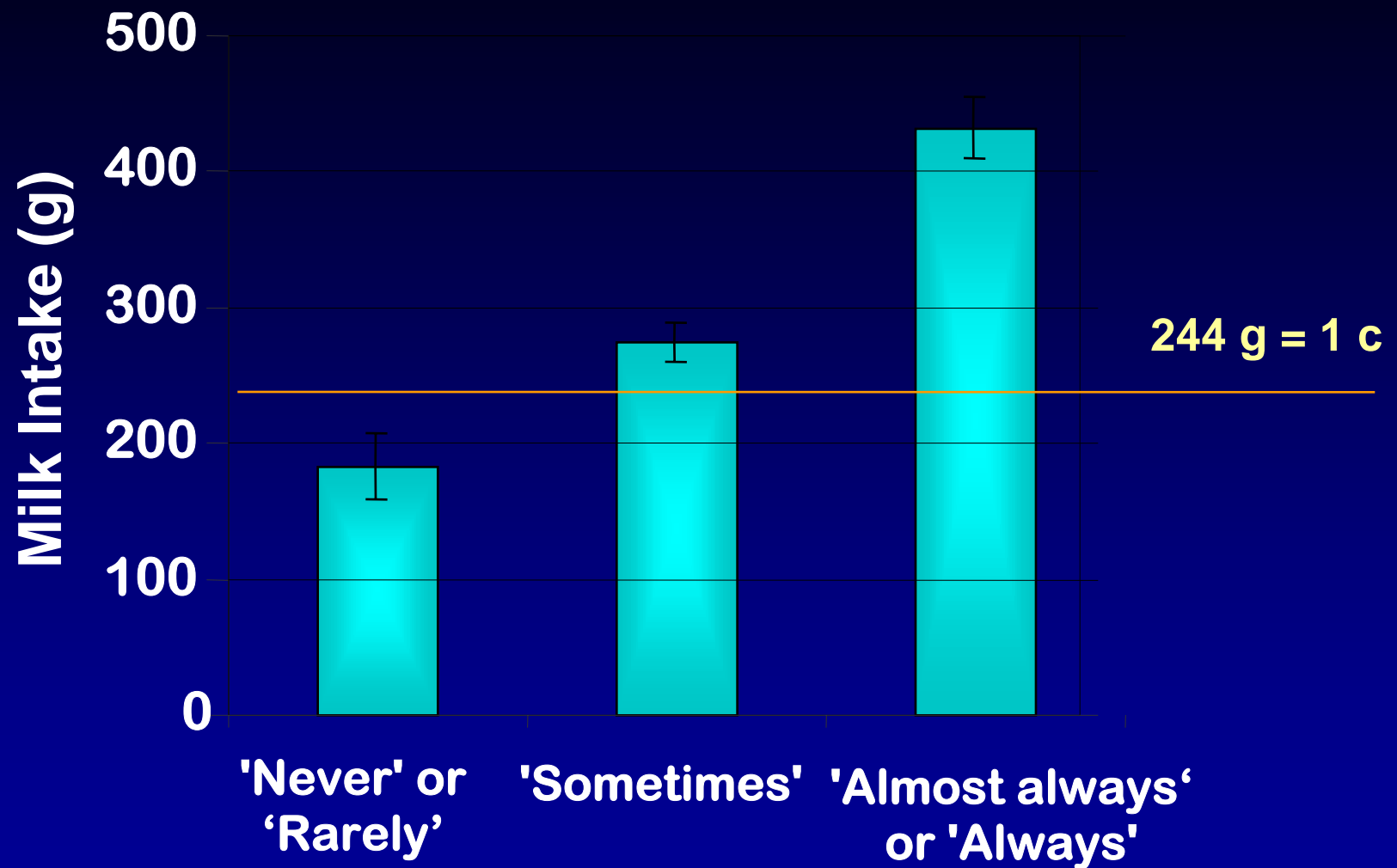
**Monitoring  
Room**

# Parents as providers



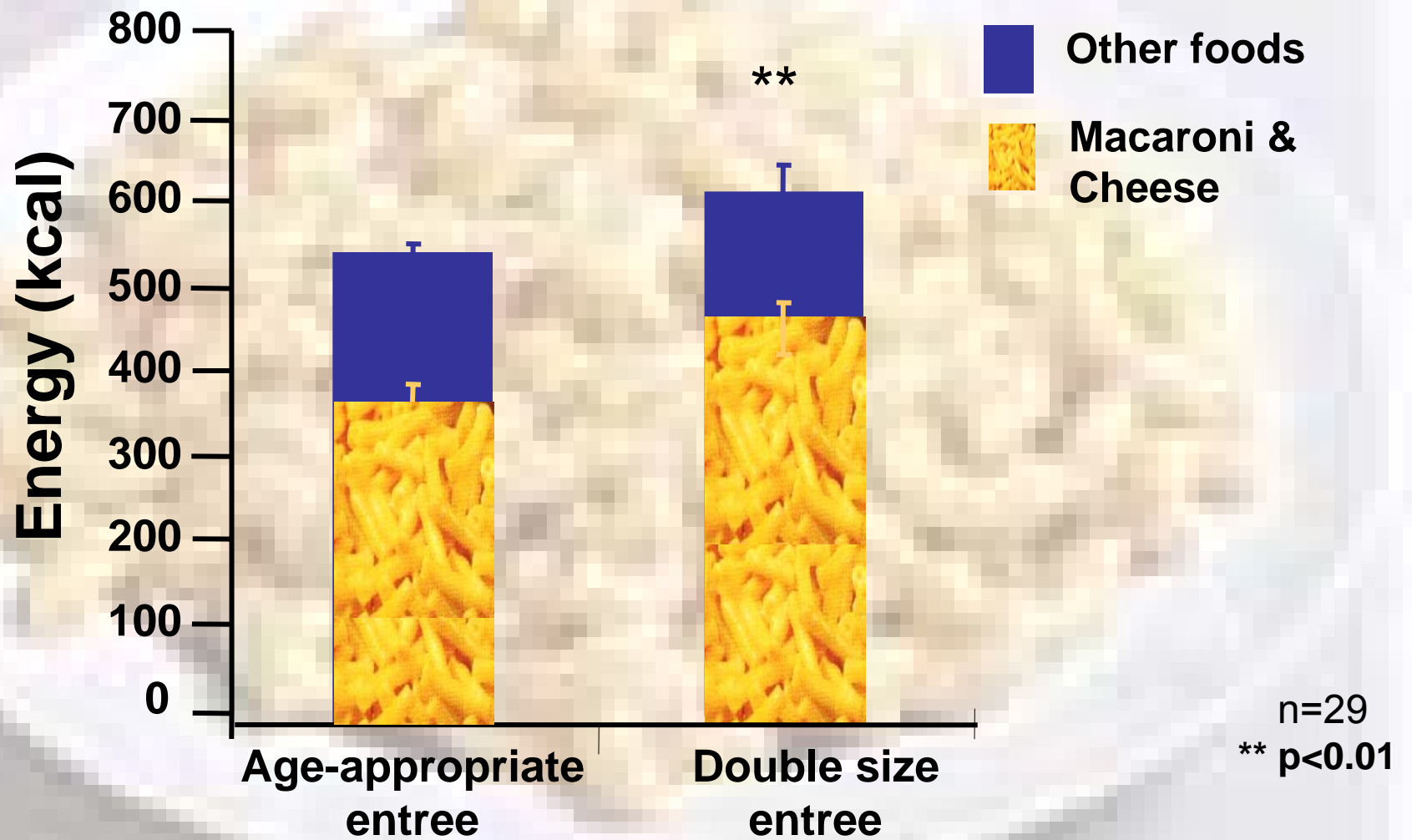
Sullivan, Birch, *Dev Psych*, 1990



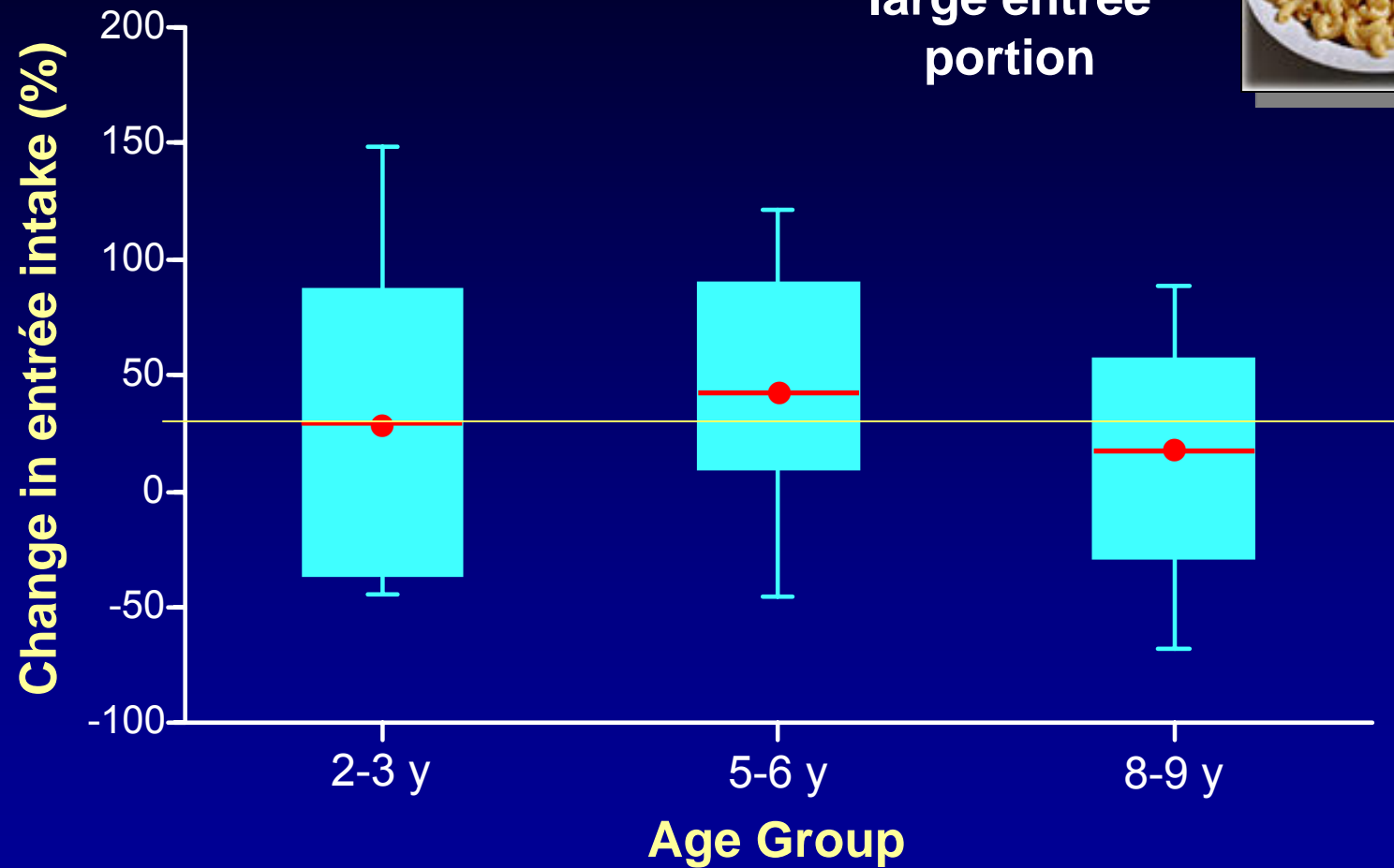


**Frequency of serving milk to 9 year-old girls at meals and snacks**

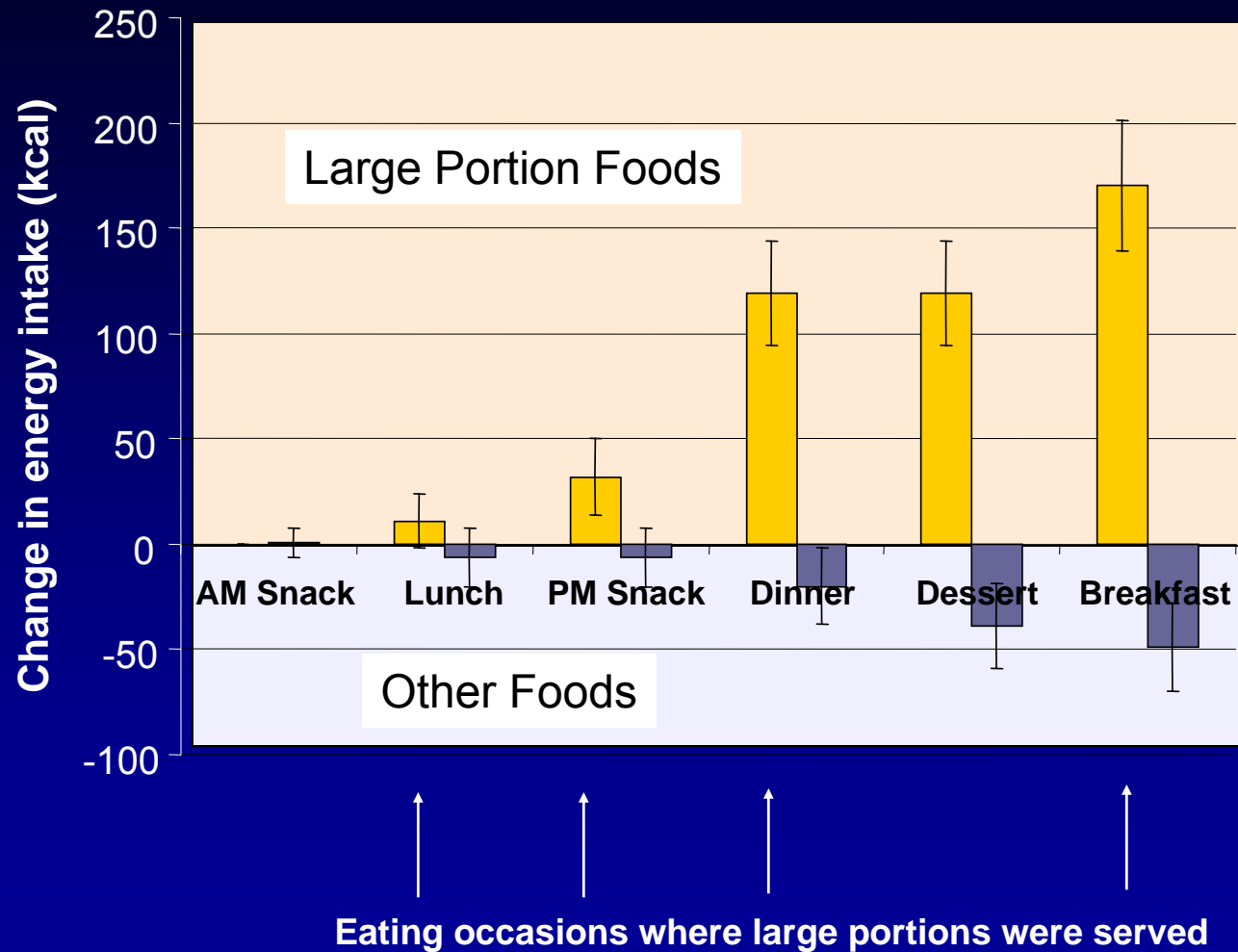
n=173



**Ate 29% more  
when served a  
large entrée  
portion**

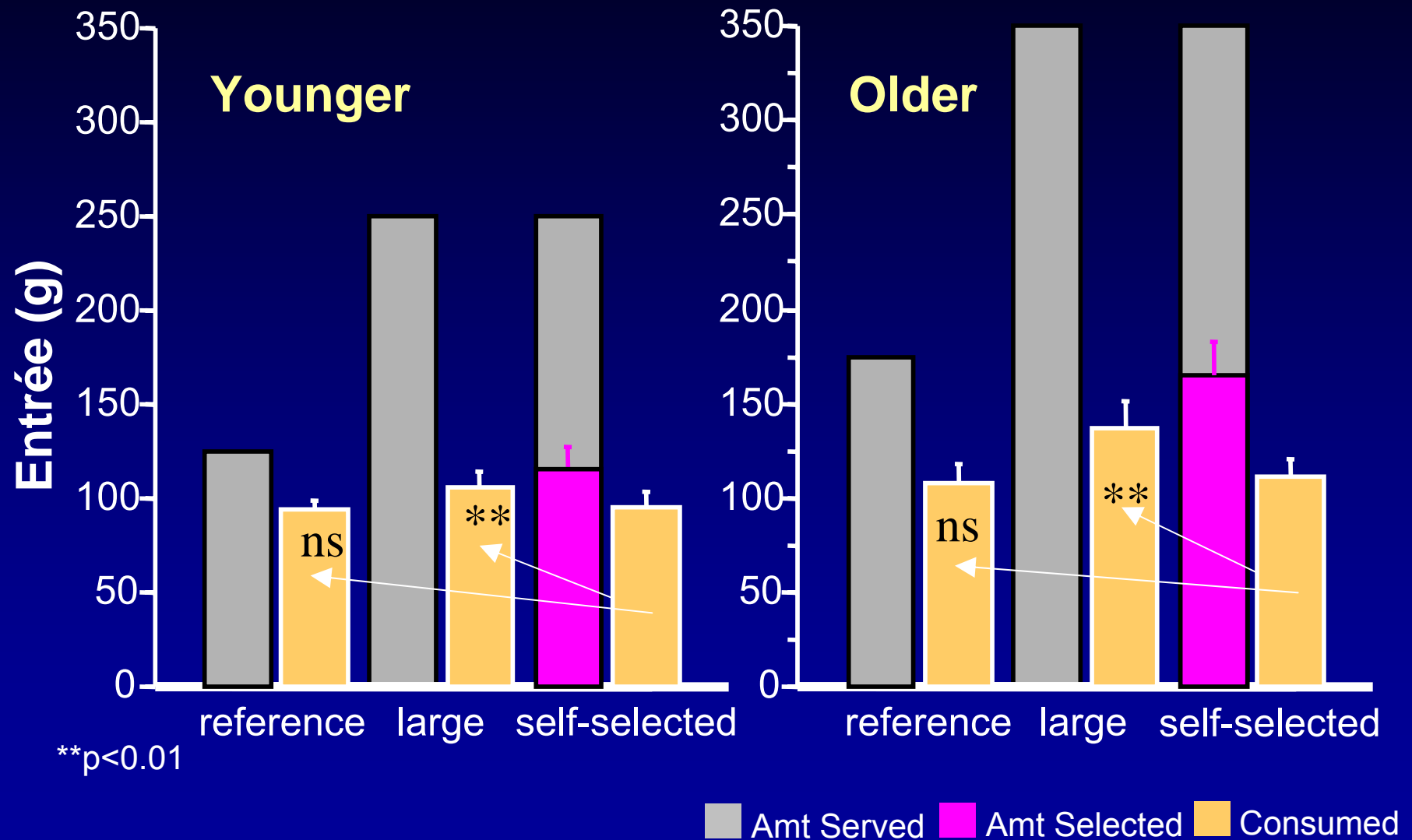


# ↑ 9% total daily energy intake



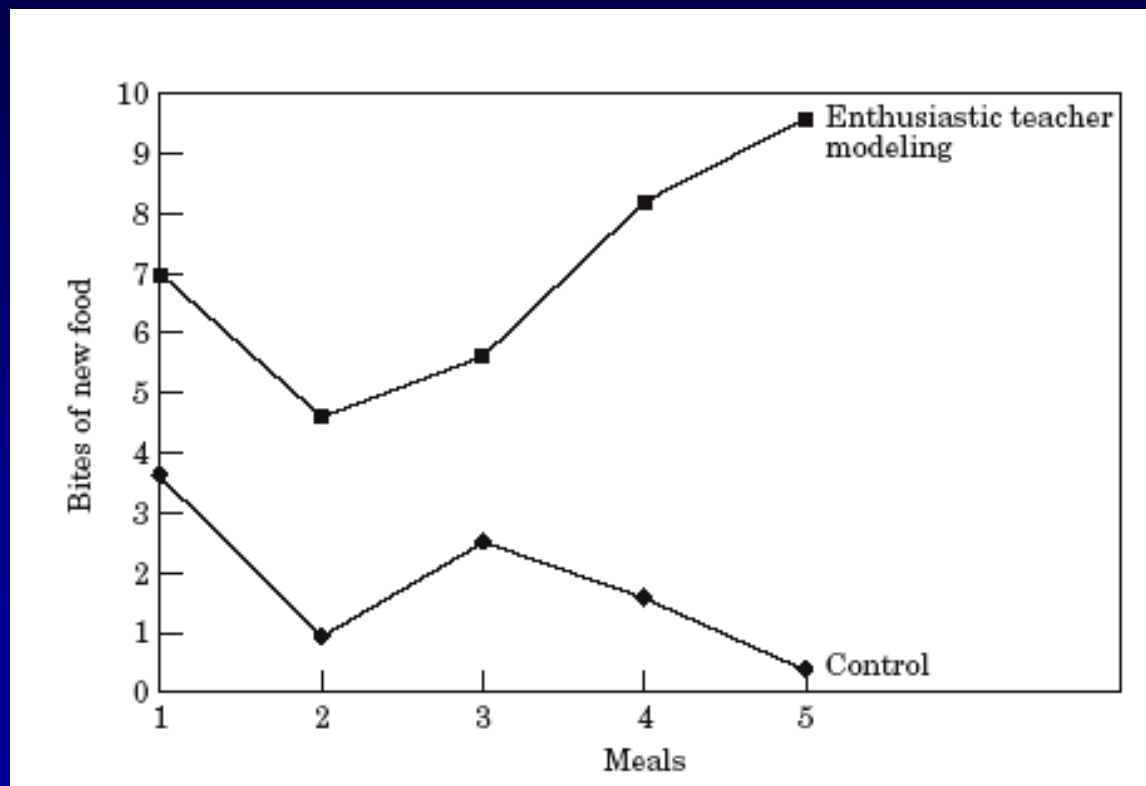
N=59

# When kids serve themselves



# Parents as models

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Hendy, Raudenbush, *Appetite*, 2000



# Parents as teachers

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## ➤ **Pressure to eat**

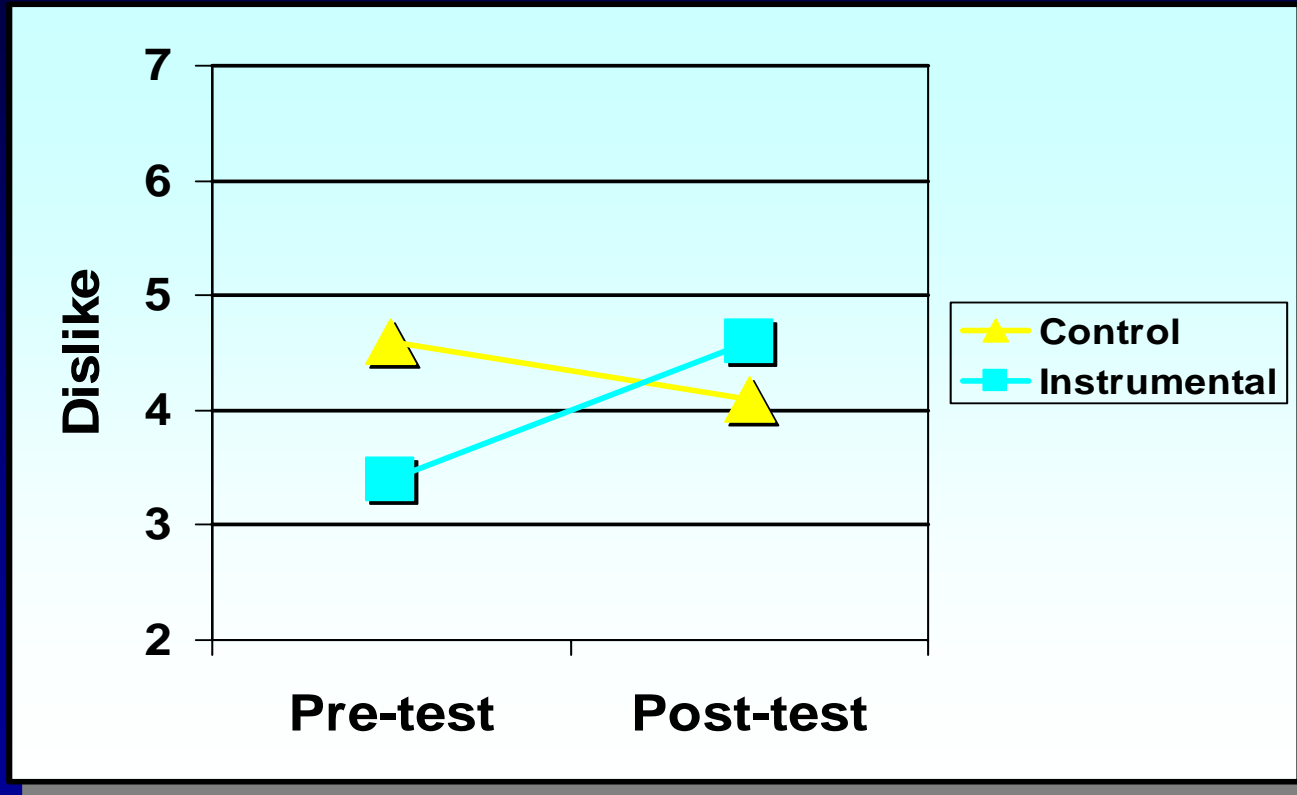
- Decrease food preference, intake
- Disrupts children's sensitivity to the energy content of foods consumed

## ➤ **Restriction of specific foods**

- Increase food preference
- Promote eating in the absence of hunger

# You can't leave the table until you eat your vegetables!

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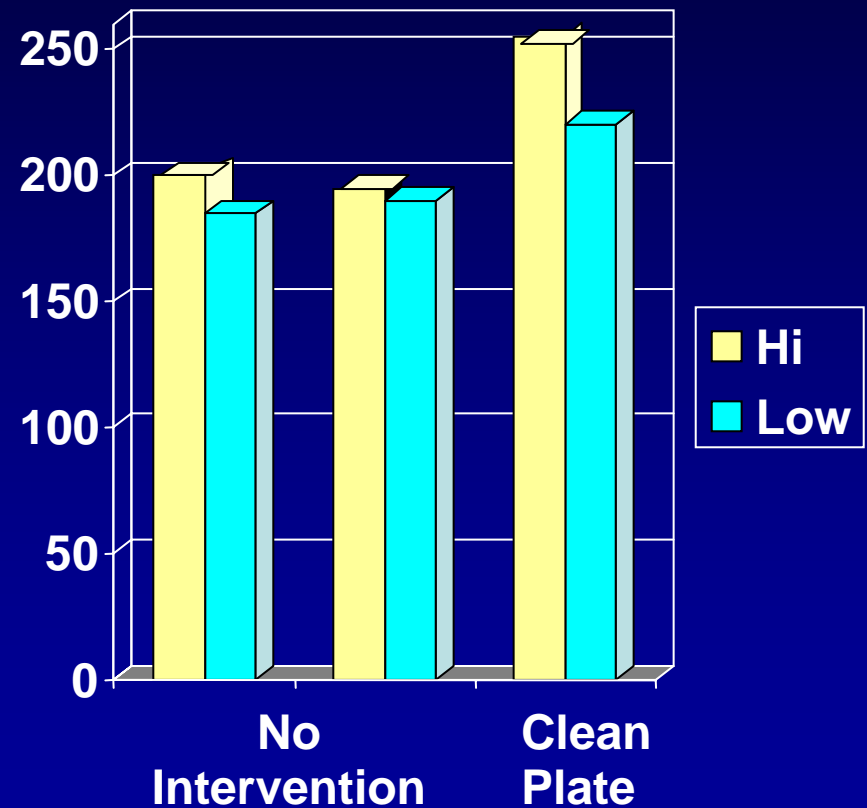
Birch, Marlin, Rotter, *Child Dev*, 1984

# Clean your plate

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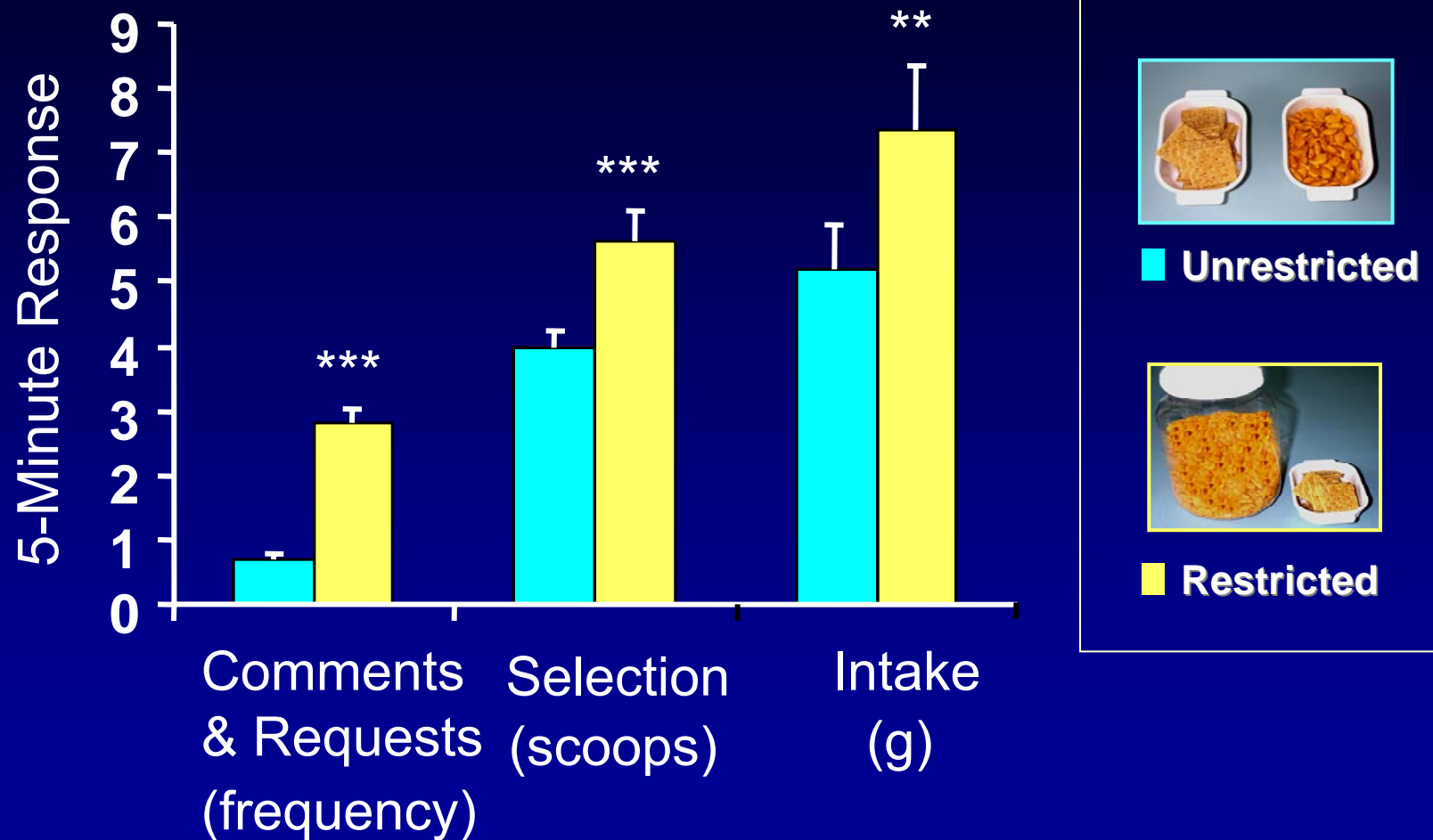
## External cues

- amount remaining on plate
- time on the clock

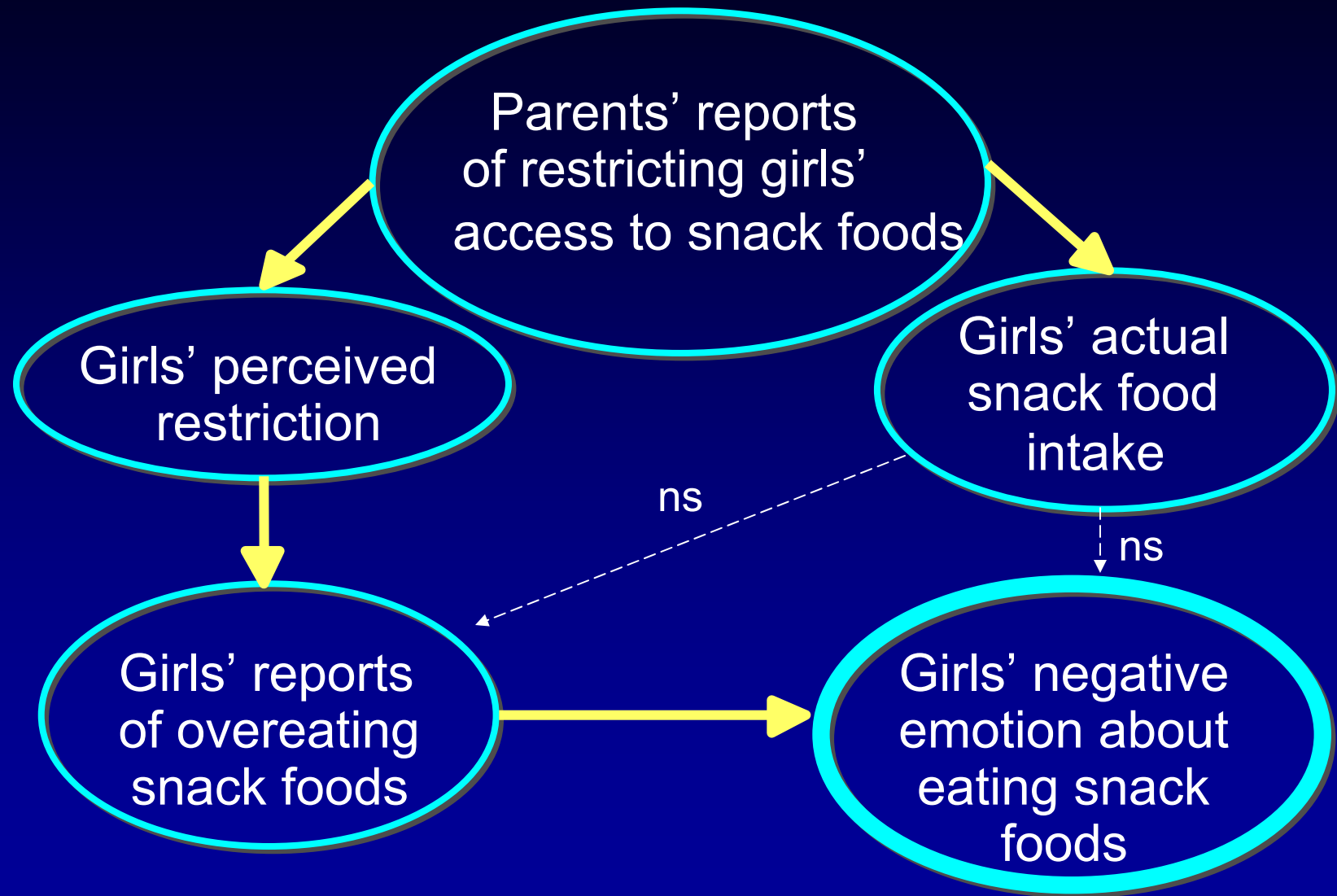


Birch, et al., *Learn Motiv*, 1987

# Restrictive feeding practices



# Negative feelings about eating



# Restriction in Hispanic families

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- Restriction reported at levels similar to non-Hispanic white families.<sup>1</sup>
- Among 300 Hispanic families, higher levels of restriction associated with <sup>2</sup>
  - children's negative evaluation of eating.
  - children's reports of secretive eating.

<sup>1</sup>Andersen et al., *Preventive Med*, 2005; <sup>2</sup>Fisher, Patrick, Butte, SRCD, 2005



# What are the implications?

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- Make foods available and accessible
- Share meals, foods
- Encourage self-serving and small portions for small eaters
- Create a supportive environment
  - Schedule, limit setting
  - Responsive to the child



# USDA Children's Nutrition Center Children's Eating Laboratory

**BCM**  
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**Observation Rooms**



**Monitoring  
Room**

